

Far Touch Inc.

Remote Interaction Technologies

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RE: Application 10/630,639

Art Unit 2121

Examiner: Mr. Thomas K Pham

Dear Mr. Pham:

Thank you reviewing my application and for your letter dated September 9, 2005.

The attached document provides additional clarifying information that supports the Application 10/630,639 being patentable over both US Patent Application 2002/0068983 (Sexton) and Sexton's application in light of US patent 6,188,325 (Vogel).

Kind regards



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Because far away...doesn't have to be!
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MAR 20 2006

July 19, 2006

Commissioner for Patents
c/o Thomas Pham
PO Box 1450
Alexandria, VA
22313-1450

RE: Application 10,630,639
Examiner: Thomas K Pham
Art Unit: 2121

Dear Mr. Pham:

Greetings! The purpose of this document is to provide supplemental information in response to Sections 8 and 9 of your letter dated September 9, 2005. Those sections assert that my application number 10/630,639 is unpatentable because of prior art found in:

- o Application No. 2002/0068983 as filed by Daniel W. Sexton
- o US Patent No 6,188,325 as filed by Peter S. Vogel.

The goal of this document is to provide additional information to show that application number 10/630,639 represents significant improvements over the noted prior art.

Regarding Sexton "Method for using portable wireless device...."

As noted, Sexton describes a system whereby a wireless device (34) sends signals over the internet via an internet service provider (28) to a local server (22), which forwards relays information to a Programmable Logic Circuit (16). It is inferred that the local server can be connected to multiple PLCs. It is clearly stated that a single PLC can control multiple electronic devices.

In these descriptions, server 28 is specifically labeled as being operated by a third party, (an Internet Service Provider) and is therefore not an element that can be accessed, programmed or otherwise manipulated.

While no doubt a useful invention, it contains the following weaknesses:

Technology Architecture

The underlying technology design does not include a centralized server that could connect to all possible devices. Instead, groups of PLCs are each connected to a "local servers" via an ISP. This design has the following drawbacks:

1. In order to control PLCs in Los Angeles, New York, London, Seoul, and Sidney, the operator would need to make 5 different outbound connections to 5 different local servers.
2. There is no method for resolving or prioritizing attempts for multiple operators to connect to the same local server or PLC.
3. The lack of a centralized view prevents visibility into the entire network of PLCs and therefore makes consolidated reporting impossible.
4. The lack of a central server prevents operations of a technician from being stored, shared, and then instantly reused by coworkers
5. It would be difficult for large numbers of people to share the control of a single PLC as the PLC or attached local server would have to maintain a connection with all of the remote parties.

No control from a web browser

The invention does not mention the possibility of using a web browser to control the PLC. Instead, Sexton notes that a PLC would be updated as follows:

"[0008]A programming device (not shown) uses a suitable programming language, such as ladder logic, to enter the program into memory 70. An exemplary programming device is a hand held programmer or a laptop computer."

This is a very important distinction. The absence of browser-only based control has the following significant drawbacks:

1. An operator must have a specific machine with specific software (e.g. logic ladder) to remotely control a PLC. The technician could not, for example, utilize a computer a friend's house or at the public library.
2. Access to the internet is readily available. However, many of the computers providing this access prove the user with a web browser and little more. Many are secured to prevent users from installing software. For example, the technician in our example could not modify the behavior of a PLC from a web kiosk at an airport, or using the webTV interface commonly available in most hotel rooms.

As a result, the technician wishing to manage a remote PLC can only so from a specific pre-determined device (e.g. laptop).

Should this device fail, become lost or damaged, or simply run out of batteries, the technical must obtain a substitute piece of specialized equipment to continue.

No real time graphical feedback of objects being controlled

Sexton notes that the PLC is capable of controlling a wide array of electrical and mechanical devices including solenoids, relays, contactors, pilot lamps, and LED readouts to name a few. However, Sexton's invention does not incorporate the benefits of real-time graphical feedback.

For example, the user may not be familiar with the device connected to the PLC. Similarly, she or he may not know that exact position or state of the device. In the case of a new user, or a user who is uncertain of the nature of the attached device will function less effectively than if they could see an animated representation of the device being controller.

Conclusions regarding Sexton

The advantages claimed under application 10/960,639 are vastly superior in that:

1. A central server (separate from the internet or ISP) provides the following benefits:
 - a) An operator makes only 1 outbound connection to the server. The server in turn can replicate that signal and send it to potentially ALL of the devices connected to it.
 - b) The central server can discover new devices as they are added to the network and maintain a consolidated and up-to-date view of all devices that can be controlled.

- c) The central server acts as a clearing authority to manage and resolve conflicts between multiple operators attempting to control the same device.
 - d) A single data source can contain all of the actions by all of the operators for all of the devices in the system. This allows for robust reporting and analysis across the entire fleet of connected devices.
 - e) By employing a central server, actions can be stored instantly shared between all other persons controlling devices – at that moment or anytime in the future.
2. The ability to control devices using only a web browser is a major advantage offering the following benefits:
- a) The user can use any device that can operate a web browser – including public terminals that prevent users from loading personal software. This negates the requirement of having a specific piece of equipment that can be lost, damaged, or otherwise rendered unavailable.
3. Real time graphical feedback allows for the following major advantages:
- a) a person controlling a remote device instantly understand the result of the requested actions.
 - b) New or inexperienced users will immediately know when an undesired effect has occurred. Real time feedback provided in this manner helps the user learn how to operate the device.
 - c) In some cases, the remote mechanical device may have a complex behavior that makes is difficult for the operator to visualize

Regarding Vogel "Long Distance Remote Control"

Vogel's invention pertains to electromechanical devices that are traditionally controlled by a nearby handheld remote control (e.g. a VCR, TV, Stereo, garage door, kitchen appliance). Using Vogel's invention, the same signals are generated in a far away location and sent over vast distances using radio waves, microwaves, or any another other alternative wireless method. These signals are then captured and re-modulated to be compatible with their intended target device. In this manner, an individual could turn on their coffee maker or open their garage door from many miles away

As noted, a person with the appropriate skill could combine the inventions of Sexton and Vogel to eliminate the need for the internet and allow Sexton's input device to communicate directly with the "local server" or even the PLC directly.

If combined, the portable wireless device described by Sexton could control a wide array of devices from complex industrial applications described by Sexton to the everyday consumer products mentioned by Vogel.

While such a combination may appear useful at first glance, the combined inventions have the following significant drawbacks:

Technology Architecture

As with Sexton, even the combined technology design does not include a centralized server that could connect to all possible devices. Instead, a specific transmitter is configured to control a collection of devices in a home or defined area. In order to control appliances in the US, Europe, and Asia, the operators would need to make multiple connections to multiple locations.

The lack of a centralized server creates the following problems:

1. There is no method for resolving or prioritizing attempts for multiple operators to connect to the same devices – in truth, there is no way for the two people trying to control the same device to even be notified of the conflict.
2. The lack of a centralized view prevents a user from having visibility into the entire network of device – they can only control device they know of and can program into their transmitter
3. Lack of bi-directional communication means the transmitter can not “learn” about new devices that are added to the network at a later date.
4. Reporting is limited to the devices “known” by the transmitter.
5. Lastly, it would be impossible for multiple people to share the control of a group of devices as no one would have any awareness of anyone else’s actions.

Mono-Directional Communication

A person controlling a remote device can not know the state of the device prior to trying to control it. Specifically Vogel states:

"...Some types of VTR are designed so that receipt of a "pause" code causes the tape to pause if it is moving, or resume moving if paused. This is a convenient arrangement in the case of a remote control being used in close proximity to the VTR, where it is possible for the operator to ascertain whether the tape is moving or not, but in the case of the embodiment of FIG. 1, where the command is being issued from a great distance, sending a "pause" signal with the intention of pausing the tape may actually cause the tape to start, if it has previously been "paused"."

And also:

"TVs equipped with a remote control handset capable only of effecting "channel up" and "channel down" commands. Because the person at the distant control location does not necessarily know which channel is currently selected on the TV, it is not sufficient to provide "channel up" and "channel down" commands to the user of the present invention."

As a result, the invention depends upon business logic that exists at the local site to modify requests to achieve the desired effect. FIG. 2 describes a system that monitors the operational condition of the TV or VTR and apply suitable intelligence to achieve the desired result.

While this will help the user from making mistakes, the user does not know if their control requests were successful. There is no feedback loop that allows the user to compare their desired result with the actual result.

Physical Transmitter Required – No browser based control

To remotely control a device, the user must have a physical transmitter. As with Sexton's invention, this presents a significant drawback in that the ability to control a remote device dependent upon having unique physical device present. Should the device become damaged or otherwise unavailable, the user would have no way of remotely controlling the device.

No real time graphical feedback of objects being controller

Vogel's invention does allow for a device to be remotely controlled from a great distance, however, without a real-time feedback, the universe of devices that can be safely controlled via Vogel's invention is limited to simple consumer electronics (e.g. a toaster). This method of communication would be disastrous if applied to say, a remote controlled car or weapons system.

Conclusions regarding Vogel

The addition of Vogel's technology to Sexton's invention would allow a remote user to remotely control a device from a great distance without using a computer or the internet.

While this is technically possible it is far from desirable and (if anything) presents severe limitations. While the combined technologies do not require the internet, that distinction comes at a significantly reduce level of quality and a reduction in the many advantages afforded by application 10/960,639.

In closing

The invention described in Application 10,/630,639 includes new and previously undisclosed methods for the remote control of devices. In addition, application 10/960,639 provides for several dramatic improvements over prior art.

The advantages claimed under application 10/960,639 are vastly superior in that:

1. Persons controlling remote items do not need a physical control device. The controls for this invention operate within a web browser – thus allowing both high availability and flexibility. More specifically, the user can access devices across a wide range of devices (Windows, UNIX, Apple, PalmOS) and is not required to download a special application.
2. The design of the system allows for all control signals to be centralized and managed such that control of any number of devices can shift between a very large population of users.
3. Bi-directional communication enables the user to know the state of a target device before sending a control request.

4. The invention presented here would enable the user to "record" a set of behaviors for playback and make those sequences instantly available to all other users of the system.
5. an easy to use graphical interface that provides an intuitive way for the person controlling the device to understand what to do – with little or no training or prior education.
6. A graphical representation of the device being controlled provides instant visual and auditory feedback regarding the behavior of the physical device being controlled.

I welcome the opportunity to answer additional comments and criticisms regarding this application.

If I can be of further assistance, please don't hesitate to contact me via one of the methods listed below.

Very respectfully submitted,



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